

ABSTRACT

A hot-air circulation furnace for heating a heating-target to a predetermined temperature by circulating hot air in the furnace, which is capable of performing continuous treatment while the size is small, or forming
5 a heating zone and a soaking zone while using hot air at a fixed temperature. In the interior of the furnace which is divided into an outer peripheral region (6) and an inner region (7) by an annular partition (8) and paths (9) and (10) in the vicinities of a floor and a roof respectively, hot air supplied from a heat source (5) is blown out from an axial-flow fan (11) toward a hearth (2) in the
10 inner region (7) to form a circulating flow passing through an annular heating-target mount (23) on the rotating hearth (2) installed in the outer peripheral region (6). The heating-targets are taken out one by one after increasing the temperature of the heating-target on the mount (23) to be a predetermined point during one rotation of the hearth (2). Further, a
15 partition (12) whose outlet-side opening θ_2 is narrower than the inlet-side opening θ_1 is provided inside the annular partition (8) to supply part of high-temperature gas blown out from the axial-flow fan (11) to the heating-target mount (23) while increasing the velocity of the gas.